

What is claimed is:

1. A digital printing system, comprising:
an image processing means for processing digital image data ;
and
an image output means for producing a printed output using at least yellow (Y), magenta (M), and cyan (C) coloring materials,
wherein the system is so configured as to reproduce:
a yellow (Y) color having a^* and b^* values of -15 to 0 and +71 to +85, respectively, in the CIE 1976 ($L^*a^*b^*$) color space at a blue density of 1.0 using the yellow (Y) coloring material alone;
a magenta (M) color having a^* and b^* values of +50 to +65 and -30 to 0, respectively, in the CIE 1976 ($L^*a^*b^*$) color space at a green density of 1.0 using the magenta (M) coloring material alone;
a cyan (C) color having a^* and b^* values of -45 to -15 and -40 to -5, respectively, in the CIE 1976 ($L^*a^*b^*$) color space at a red density of 1.0 using the cyan (C) coloring material alone; and
wherein the system is so configured as to produce a printed output having L^* , a^* , and b^* values of +58 to +78, +20 to +30, and +25 to +32, respectively, in the CIE 1976 ($L^*a^*b^*$) color space from digital image data having red (R), green (G), and blue (B) values of 239, 167, and 127, respectively, in the RGB color space.
2. A digital printing system according to Claim 1, wherein the system is so configured as to produce a printed output having L^* , a^* ,

and b^* values of +70 to +90, +10 to +20, and +10 to +20, respectively, in the CIE 1976 ($L^*a^*b^*$) color space from digital image data showing red (R), green (G), and blue (B) values of 255, 206, and 179, respectively, in the RGB color space.

3. A digital printing system according to Claim 1, wherein the system is so configured as to produce a printed output having L^* , a^* , and b^* values of +33 to +53, +10 to +20, and +20 to +27, respectively, in the CIE 1976 ($L^*a^*b^*$) color space from digital image data showing red (R), green (G), and blue (B) values of 144, 99, and 59, respectively, in the RGB color space.

4. A digital printing system according to Claim 1, wherein the system is an electrophotographic printing system using an electrophotographic image-receiving sheet,

the electrophotographic image-receiving sheet comprising:

a support, and

at least one toner image-receiving layer arranged on the support.

5. A digital printing system according to Claim 4, wherein the support is one selected from coated paper, cast paper, and the support comprising a base and a polyolefin resin layer arranged at least on one side of the base.

6. A digital printing system according to Claim 4, wherein the system uses at least a yellow (Y) toner, a magenta (M) toner, a cyan (C) toner, and a black (K) toner, each of these toners having an average particle diameter of 7 μm or less and an average of shape factors represented by the following equation of 1 to 1.5:

$$\text{Shape factor} = (\pi \times L^2) / (4 \times S)$$

wherein L is a maximum length of a toner particle; and S is a projection area of the toner particle.

7. A digital printing system according to Claim 6, wherein the toners each comprise at least a binder resin and a coloring agent, have a volume-average particle diameter distribution coefficient (GSDv) of 1.3 or less, and a ratio (GSDv/GSDn) of the volume-average particle diameter distribution coefficient (GSDv) to a number-average particle diameter distribution coefficient (GSDn) of 0.95 or more.

8. A digital printing system according to Claim 6, wherein the system uses at least a yellow (Y) toner, a magenta (M) toner, a cyan (C) toner, a black (K) toner, a light magenta (LM) toner, and a light cyan (LC) toner.

9. A digital printing system according to Claim 6, wherein the toners are produced by a method for producing a toner, comprising the steps of:

(i) forming aggregated particles in a dispersion containing

dispersed resin particles to thereby prepare an aggregated particle dispersion;

(ii) adding a fine particle dispersion containing dispersed fine particles to the aggregated particle dispersion to apply the fine particles to the aggregated particles to thereby form composite particles; and

(iii) heating the composite particles to fuse and unite the constitutional particles to thereby form toner particles.

10. A digital printing system according to Claim 4, comprising a belt fixing and smoothing device comprises:

a heating and pressuring member;

a belt member;

a cooling device; and

a cooling and separating unit,

wherein the digital printing system is so configured as to fix toners to the electrophotographic image-receiving sheet.

11. A digital printing system according to Claim 10, wherein the belt member comprises a support film and a releasing layer arranged on the support film.

12. A digital printing system according to Claim 11, wherein the releasing layer comprises one of a fluorocarbonsiloxane rubber layer alone or a combination of a silicone rubber layer and a

fluorocarbonsiloxane rubber layer arranged on the silicone rubber layer.

13. A digital printing system according to Claim 12, wherein the fluorocarbon siloxane rubber comprises a main chain which contains at least one of perfluoroalkyl ether group and perfluoroalkyl group therein.

14. A digital printing system according to Claim 1, wherein the system is a sublimation dye transfer printing system using a thermal transfer image-receiving sheet comprising:

a support; and

an ink layer being arranged on the support and containing at least a sublimation dye.

15. A digital printing system according to Claim 1, wherein the system is a marking printing system.

16. A digital printing system according to Claim 1, wherein the system is so configured as to produce a print having a 45-degree glossiness of 60 degrees or more.

17. A digital printing system according to Claim 1, wherein the system uses a color conversion three-dimensional look-up table (LUT).

18. A digital print produced by processing digital image data and outputting at least yellow (Y), magenta (M), and cyan (C) coloring materials,

wherein the digital print is so configured as to reproduce:

a yellow (Y) color having a^* and b^* values of -15 to 0 and +71 to +85, respectively, in the CIE 1976 ($L^*a^*b^*$) color space at a blue density of 1.0 using the yellow (Y) coloring material alone;

a magenta (M) color having a^* and b^* values of +50 to +65 and -30 to 0, respectively, in the CIE 1976 ($L^*a^*b^*$) color space at a green density of 1.0 using the magenta (M) coloring material alone;

a cyan (C) color having a^* and b^* values of -45 to -15 and -40 to -5, respectively, in the CIE 1976 ($L^*a^*b^*$) color space at a red density of 1.0 using the cyan (C) coloring material alone; and

wherein the digital print is so configured as to produce a printed output having L^* , a^* , and b^* values of +58 to +78, +20 to +30, and +25 to +32, respectively, in the CIE 1976 ($L^*a^*b^*$) color space from digital image data having red (R), green (G), and blue (B) values of 239, 167, and 127, respectively, in the RGB color space.

19. A digital print according to Claim 18, wherein the print is any one of an electrophotographic print, a sublimation dye transfer print, and a marking print.

20. A digital print according to Claim 18, wherein the print having a 45-degree glossiness of 60 degrees or more.